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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,883	01/17/2001	Hiroyuki Shibata	23.1093	4981

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EXAMINER

KOVALICK, VINCENT E

ART UNIT

PAPER NUMBER

2673

DATE MAILED: 11/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/760,883

Applicant(s)

SHIBATA ET AL.

Examiner

Vincent E Kovalick

Art Unit

2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 January 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,8-10,12-15,17-19,21-23,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 3,7,11,16,20 and 24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2673

### **DETAILED ACTION**

1. This Office Action is in response to Applicant Patent Application, Serial No. 09/760,883, with a file date of January 17, 2001.

#### ***Drawings Objected to***

2. The drawings are objected to because Figs. 1-6 must be labeled "Prior Art". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1-2, 6, 10, 14-15, 19 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwajima et al. (USP 6,339,422).

Relative to claims 1, 6 10, 14, 19 and 23, Kuwajima et al. **teaches** a display control circuit and display control method (col. 2, lines 54-67 and col. 3, lines 1-62 and Fig. 2). Kuwajima et al.

Art Unit: 2673

further **teaches** a display apparatus comprising a clock generating circuit, a drive waveform generating circuit for generating a drive waveform by using a clock from said clock generating circuit, and a display panel for displaying an image in accordance with said drive waveform, wherein: said clock generating circuit generates a clock whose frequency varies continuously, and said drive waveform generating circuit drives and display panel by outputting a drive waveform whose frequency varies in accordance with said frequency varying clock (col. 4, lines 39-59). Still further, Kuwajima et al. **teaches** said display apparatus comprising a clock generating circuit, a drive waveform generating circuit for generating drive waveform by using a clock from said clock generating circuit, and a display panel for displaying an image in accordance with said drive waveform, wherein: said drive waveform generating circuit drives said display panel by sequentially switching an output drive waveform between drive waveforms corresponding to at least two frequencies (col. 4, lines 54-60).

The difference between the teaching of the instant invention and the teaching of Kuwajima et al. is that the teaching of the instant invention is related specifically to a display apparatus with reduced noise emission wherein the teaching of Kuwajima et al. is directed to display control circuitry including a variable frequency control circuit.

It would have been obvious to a person of ordinary skill in the art at the time of the invention that the limitation as set forth in claims 1, 6, 10, 14, 19 and 23 are addressed in the teachings of Kuwajima et al.

Art Unit: 2673

Regarding claims 2 and 15, Kuwajima et al. further teaches said display apparatus wherein said clock generating circuit generates the source clock of said display apparatus (col. 4, lines 42-44).

5. Claims 4, 8, 12, 17, 21, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwajima et al. as applied to claims 1, 6, 10, 14, 19 and 23 respectively in item 4 hereinabove, and further in view of Admitted Prior Art (Applicant's Disclosure, page 7, lines 1-8 and Applicant's

Fig. 1)

Regarding claims 4, 8, 12, 17, 21 and 25, Kuwajima et al. **does not teach** said display apparatus being a plasma display apparatus.

Applicant's Disclosure **teaches** said display apparatus wherein said display apparatus is a plasma display apparatus (Applicant's Disclosure, page 7, lines 1-8).

It would have been obvious to a person of ordinary skill in the art at the time of the invention that the display driving circuitry as described herein would be applicable to a plasma display device.

6. Claims 5, 9, 13, 18, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuwajima et al. as applied to claims 1, 6, 10, 14, 19 and 23 respectively in item 4 hereinabove, and further in view of Tanaka et al (USP 6,130,420).

Regarding claims 5, 9, 13, 18, 22 and 26, Kuwajima et al. **does not teach** said display apparatus wherein during a quiescent period, said clock generating circuit performs control of said clock used for driving said display panel.

Art Unit: 2673

Tanaka et al. **teaches** an image sensing apparatus and a method for driving said apparatus (col. 1, lines 63-67, col. 2; lines 1-67 and col. 3, lines 1-18). Tanaka et al. further **teaches** said display apparatus wherein during a quiescent period, said clock generating circuit performs control of said clock used for driving said display panel (col. 2, lines 31-34). It being understood that one of the operating modes will be a quiescent period.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate in the apparatus as taught by Kuwajima et al. the feature as taught by Tanaka et al. in order permit the clock generating circuit to exercise control of the clock used for driving the display panel only during a quiescent period so as to not interfere with other functions being performed relative to the display panel during the non-quiescent periods.

***Allowable Subject Matter***

7. Claims 3, 7, 11, 16, 20 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claims 3, 7, 11, 16, 20 and 24, the prior art of record **does not teach** said display apparatus wherein said clock generating circuit generates a clock whose frequency varies continuously within a range of plus or minus 1 percent of a reference frequency.

Art Unit: 2673

*Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U. S. Patent No.	5,917,461	Sakami et al.
U. S. Patent No.	5,748,165	Kubota et al.
U. S. Patent No.	3,889,225	McKenzie et al.

Art Unit: 2673

***Responses***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Vincent E. Kovalick** whose telephone number is **(703) 306-3020**. The examiner can normally be reached Monday-Thursday from 9:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Bipin Shalwala**, can be reached at **(703) 305-4938**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

***Inquires***

10. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is **(703) 306-0377**.



Vincent E. Kovalick



Amare Mengistu  
Primary Examiner